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## Tobacco Diseases: An Aid to Identification and Control

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PURDUE UNIVERSITY  
Cooperative Extension Service  
Department of Botany and Plant Pathology

BP-9-1

# TOBACCO DISEASES

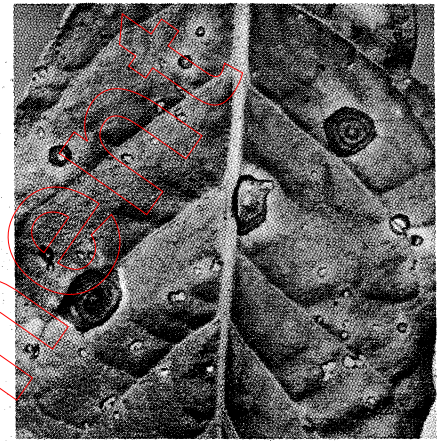
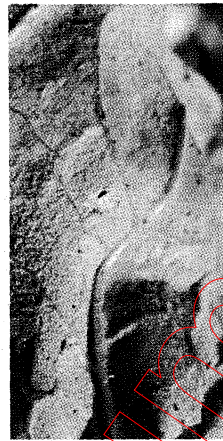
## An Aid to Identification and Control



1. STEM AND ROOT ROT OF YOUNG TRANSPLANTS



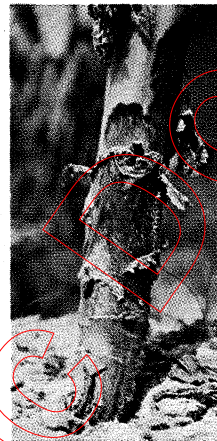
2. BLUE MOLD ON UPPER AND LOWER LEAF SURFACE OF SEEDLING



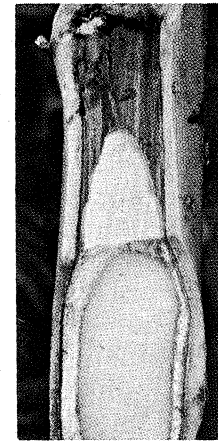
3. ALTERNARIA LEAF SPOT



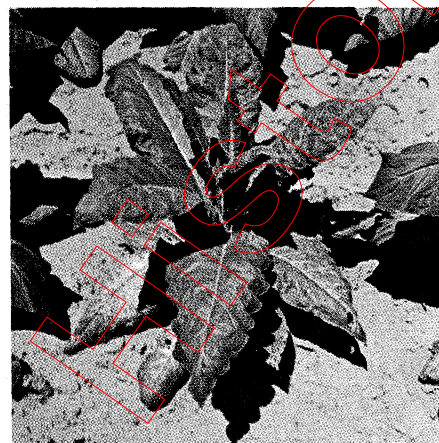
4. BACTERIAL (GRANVILLE) WILT WITH DISEASED STEM



5. BLACK SHANK SHOWING DAMAGE OUTSIDE AND INSIDE OF STEM



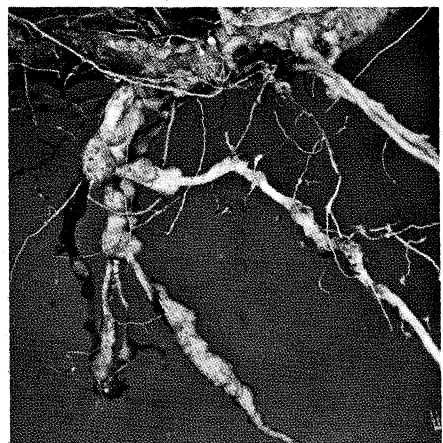
6. FUSARIUM WILT WITH CROSS SECTION OF STEM



7. TOBACCO MOSAIC



8. HOLLOW STALK



9. NEMATODE ROOT KNOT



# TOBACCO DISEASES

## An Aid to Identification

### 1. STEM AND ROOT ROT DISEASES

There are several causes of tobacco stem and root rots of young tobacco plants in Indiana. Blackleg (illustrated in Figure 1) is a bacterial disease caused by *Bacillus aroideae*. Blackleg is a bacterial soft rot attacking leaves that touch the ground and spreading from them to soft, tender stalks of tobacco transplants. Blackleg causes a dark, moist discoloration at soil level; and ultimately, infected plants rot off at ground level. Similar symptoms may result from black root rot (*Thielaviopsis basicola*) and Pythium soft rot (*Pythium sp.*). Microscopic examination is usually necessary to distinguish the above problems.

### 2. BLUE MOLD

A plant bed disease caused by the fungus *Peronospora tabacina*. First sign of the disease is a yellowing and stunting of half-grown plants similar to nitrogen starvation. In wet weather, yellow leaf spots and scalded areas appear on the leaves which may produce masses of bluish spores on the lower leaf surfaces.

### 3. ALTERNARIA LEAF SPOT

Not a problem in Indiana.

### 4. BACTERIAL (GRANVILLE) WILT

Not a problem in Indiana.

### 5. BLACK SHANK

First appears on a few plants in wet areas of the field as wilting plants which recover at night. It may be confused with drowning. The crowns of infected plants become coal black. Later this

discoloration spreads up the stem. The pith of infected stalks occurs as separated disks. Older plants wilt with all the leaves flopping down the stalk. Caused by *Phytophthora parasitica* var. *nicotianae*.

### 6. FUSARIUM WILT (YELLOW)

Appears as a slow yellowing and dying of leaves on one side of the plant. Affected leaves are dwarfed with curved midribs. Vascular tissue of stems is dark brown or black in color in contrast with the normal white or green color of healthy stems. Caused by the fungus *Fusarium oxysporium* var. *nicotianae*.

### 7. TOBACCO MOSAIC

One of the most common tobacco diseases. Characterized by a mosaic pattern of light and dark green areas on the leaves. Frequently the dark green areas follow the leaf veins. Symptoms usually appear at the growing points of rapidly growing leaves. Caused by a virus.

### 8. HOLLOW STALK

Occurs in wet seasons as a rot of the pith of tobacco stalks. The disease spreads rapidly, causing a soft rot of the pith and stem tissues. Caused by the same bacterium responsible for blackleg. Not a common problem in Indiana.

### 9. NEMATODE ROOT KNOT

Tobacco roots and rootlets enlarged at irregular intervals resulting in a "beaded" appearance. Small, white, spherical worms may be found inside the knot. Caused by the nematode *Meloidogyne incognita*.